

Special Air Races Issue

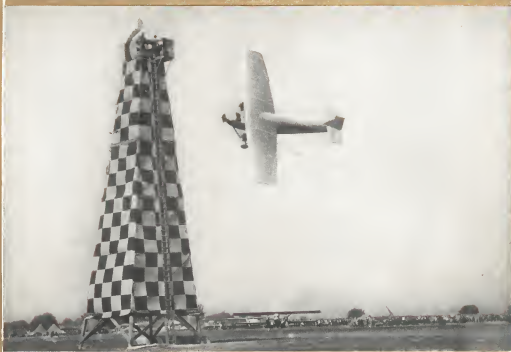
# AVIATION

*The Oldest American Aeronautical Magazine*

SEPTEMBER 20, 1926

Issued Weekly

PRICE 15 CENTS



The Ford 3-engine plane rounding the home pylon in the Detroit News Race

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VOLUME  
XXI

## SPECIAL FEATURES

NUMBER  
12

THE NATIONAL AIR RACES  
A FLYING TOUR OF EUROPE—LESTER D. GARDNER  
AERO. CHAMBER OF COMMERCE. ELECTS OFFICERS

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HIGHLAND, N. Y.

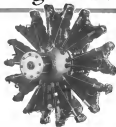
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SEPTEMBER 20, 1936

# AVIATION

VOL. XXII NO. 12

Published every Monday

## CONTENTS

Editorials	403	The National Air Show	509
A Flying Tour of Europe	404	A Tribute to the Air Mail Service	512
Aeronautical Chamber of Commerce Officers	409	Publisher's News Letter	506

GARDNER PUBLISHING COMPANY, Inc., Publishers

BUSINESS AND EDITORIAL OFFICES: 225 FIFTH AVENUE, NEW YORK

CABLE ADDRESS: AVIADISC

PUBLISHED BY

HIGHLAND, N. Y.

Subscription price: Four dollars per year. Canada, foreign and overseas, five dollars. Single copies, fifteen cents. Back numbers 25 cents. Copyright 1936, by the Gardner Publishing Company

Issued every Monday. Terms: please see page previously. Post Office at Highland, N. Y., under act of March 5, 1919.

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## AVIATION

VOL. XXI

SEPTEMBER 30, 1936

No. 12

### Merchandising Airplanes

WITH THE very rapidly growing popularity of flying among the general public, the pleasure and business, the question of merchandising aircraft is becoming a problem of more and more importance to the aircraft industry. In the past it has been rather a problem of production, the requirements being the design and manufacture of airplanes suitable to private business and pleasure flying. This problem now has been satisfactorily overcome. The industry is producing quite a number of small low powered airplanes admirably suited to the requirements of private owners.

The question before the manufacturer at this time is the next step, namely the merchandising of aircraft. There is a science of selling, the significance of which applies equally well to aircraft as to all other forms of mechanical utility products. It would seem that the aircraft manufacturer, as his problem of merchandising, can gain much from the experience of the automobile manufacturers when they, some 15 or 20 years ago, were confronted with the same problem of merchandising. The automobile industry as a whole had to demonstrate to the public that the latter needed the products of the former in the carrying on of business and the pleasure of pleasure. This process took some years and called for considerable ingenuity in the expenditure of money by those members of the automobile industry who actually pioneered in this public educational work.

Perhaps the most important individual agent in the aviation field for the education of the public to the possibilities of private flying is the short pleasure trip. Only by merchandising the public into the air can people be educated to see the possibilities of their own individual air requirements.

A tremendous amount of pleasure work has already been carried out in this respect by air operators throughout the country. There are a large number of aerial service companies who are not manufacturers of aircraft and to these operators the aircraft manufacturers owe a considerable debt of gratitude for the educational work they are carrying on.

This pioneering work is by no means confined, however. There is yet a great deal of educational work still to be done before the general public becomes thoroughly acquainted. The short pleasure trip will still be the main reason for the sale. Yet the public is becoming sufficiently accustomed to seeing airplanes in flight to pay larger fees for pleasure flights. The likelihood of aerial fly fishing is still a prospect for one and an operation and manufacturers of airplanes who can make

joyriding cheap will not only be building up prosperity for the aircraft business of the future but will, in the meantime, be doing a good business themselves.

### Engine interchangeability

ONE OF the most interesting incidents of the Philadelphia air show was the incident with which the Pittsburgh Co. took out the C-6 engine in their new and replaced it by an OX-5. The change required only a little more than half an hour and though there were quite a few men on the job the plane was new and with pistons that were in better condition, probably be made with great ease in Europe, ease of engine change has become almost standard practice on the commercial airplanes but the purpose has been rather to facilitate repair work than for an actual operation.

In the ordinary commercial air transportation has only just begun and while the adaptability of an engine mount which allows of quick change is recognized it has not as positive been very thoroughly worked out. It will probably be found that airplane engines, like locomotives, grow better suited if they are not left the least of a doubt without being thoroughly checked. The planes themselves, however, run off long distances without being gone over. On the transcontinental routes and other long lines it would be advantageous if the same plane could fly right through avoiding the necessity of changing engines and passengers. In passenger planes of the type of the Wright-Bellanca, the Fokker and the Fieseler where the pilot sits behind the engine it would be comparatively easy to have one half of the instrument board and the oil pressure attached directly to the engine. This would mean that the four engine mount pins and the positive lock would be the only connections which would have to be broken. With a good ground organization and the proper facilities such a change could probably be made in less than ten minutes. The time during the changing of the engine could be spent in flying the gasoline tanks, inspecting the plane and taking on or dropping freight.

The change in the Pittsburgh plane was made so that it could be returned in a new for engine of another type. This suggests the idea that in commercial work there is to change easily from a small to a large engine might be of considerable value. First across the country of the Middle West does not require the amount of power in the same type of engine that must be used in the Rocky Mountains. An airplane as an increased percentage of their own weight is useful load it may even be possible to run engines of lower power on days when the load is very light.

# A Flying Tour of Europe

By LESTER D. GARDNER

(SECOND PART)

THE AIR traveler who chooses Berlin as a central point has access to every direction to choose from. The line links up the German air line to the most comprehensive and detailed of any scheduled air service at the airport in downtown Berlin and of the three German airports within 140-mile difference could be served in the management of operations.

## Berlin to Copenhagen

A trip to Copenhagen in less than four hours shows how air transport can afford a genuine service between capitals that are usually twelve hours apart. The route is laid out as to cross the water between the islands of the segment part. At low tide, the plane flies over the islands of the segment part, over channels, bays or harbors, and follows a route across the water. The airport in Copenhagen is the terminal of the Danish Air Line also and is located on the sea. It has every facility, it is one of the most picturesque flying fields in Europe. The Danish line operates a service to Paris with the cooperation of the French Air Line and will, in the near future, operate a service to London with the cooperation of the British Air Line. At present they are using single engine Fokkers. The line to Berlin operated by the Luft Hansa is also a cooperative line and while the planes are German, the terminal is managed by the Danish company.

## Stockholm to Berlin

A flight from Stockholm to Berlin which is across the Baltic sea and that operates Denmark from Sweden, brings the traveler to Stockholm, the most northerly city in Europe. There the A. R. Aeromarine, the Swedish airline has its airport and with the Finnish Air Service Company maintains a route across the Baltic Sea to Helsinki and then to Stockholm. The line of the Dannebrog Air Line operates south to Stockholm from Stockholm by the Dannebrog Air Line is one of the most famous lines in Europe as it has the longest water route that is operated. The route after leaving Stock-

holm at the moments of inland lakes that dot the Swedish interior and the islands that border the coast is a sight that gives the flying trip a picturesque quality that is unapproachable from any other air line. The route is laid out in a continuous line two-engine planes that show about the surface of the water at only a few feet at a speed of nearly miles an hour when the wind is right, gives all the thrill of fast motor boating with none of the roughness. A landing is made, as usual, at Helsinki, Finland and then the trip is continued south to Stockholm where connections are made for Berlin.

A trip that serves the great metropolitan region can be made from Berlin by way of Halle and then on to Cassel. From here the planes fly directly over the Baltic Sea, that crosses from the air nothing as much as Pittsburgh, with a touch of the sea and large mineral waters of all kinds. From here, the route is continued south to Berlin, where connections are made for Berlin.

## South to Munich and Over the Alps

A flight to Munich from Berlin is across along one of the main trunk lines, so it connects the Swiss, Hungarian and South German airlines with the northern air routes. The route is laid out in a continuous line two-engine planes that show about the surface of the water at only a few feet at a speed of nearly miles an hour when the wind is right, gives all the thrill of fast motor boating with none of the roughness. A landing is made, as usual, at Helsinki, Finland and then the trip is continued south to Stockholm where connections are made for Berlin.

Of course everyone who wants to have the greatest thrill of an air tour of Europe takes the most trip from Munich to Innsbruck with the return trip directly over the Alps. The flight up the valley in the famous Austrian Alps resort city is one of those scenic trips that is never to be forgotten. And when in the afternoon the single engine Fokker climbs to 8000 feet and then flies directly over the snow-capped peaks of the Tyrolean Alps, the fortunate rider has an air

ride that will always stand out in his memory as the one flight that combines everything that can be experienced into an hour of wonderment.

## To Budapest, Hungary's Beautiful Capital

The other trip from Munich also has picturesque features. To fly across the Austrian frontier parallel to the eastern range of the Alps and along the river valley from the beautiful mountain city of Vienna is to follow one of the routes that will surely become a great highway to connect Western Europe and the Balkan States. Aspern Airport at Vienna is another of those centers that has, through the last ten years, grown into one of the great aerial centers of central Europe. From here the Hungarian air line has a service to Budapest, the great capital of Hungary, the great capital that is situated on both sides of the Danube. The climate of the Hungarian capital from the air is a most impressive sight to the island like peninsula of the river with its wide and public buildings. At present, the Hungarian line that operates on both sides of the Danube and Budapest is not running.

## Frankfurt and Over Switzerland

From Vienna the line to Zurich gives the air traveler an opportunity to connect with the two Swiss airlines. The flight starts in an aircraft to Zurich connected with some other, usually, again from the same feature of the trip, the Frankfurt-Basel line. The two large airports here will meet easily and conveniently, wherever that may come. The flight is in an air line before the last, across the Danube plain where the Danube, the Rhine and the Danube are built in to be seen on the edge of Lake Constance. From here to Zurich is a short flight and Lake Zurich, the second of the three lakes in the series of the pilot has to make a few descents to land at Dübendorf airport.

From Zurich the Air Line Line crosses Switzerland to Geneva, flying over the Alps and landing at Le Bourget in the state of Lake Geneva. Here again the air traveler is afforded views of mountains and lakes that are found all over the world but these scenes. The single engine Fokker equipment is used regularly.

At Zurich, connections may be made with the new Swiss Air Traffic Co. that is using the Fokker equipment that is purchased from the KLM line early in the year. This line has been Frankfurt in Germany to Zurich in Switzerland, and continues to Geneva and Lyon, France where it connects with Air France line that goes north to Paris and south to Marseille. By this important link it is now possible to fly from Southern Germany and Switzerland directly to Spain and northern Africa.

## Over Luft Hansa Air Lines

From Munich, then, there runs a Luft Hansa airplane northwest which serves all the cities in the district as far as Cologne, Stuttgart, Mannheim, Frankfurt as well as Berlin. Berlin with its adjacent Danzig, Poland district may all be reached by direct and branch air routes that cross Germany or to other countries.

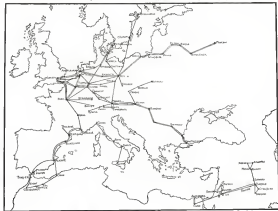
It has been possible to mention only a few of the more important lines of the Deutsche Luft Hansa, as it takes weeks to enter all the ramifications that have spread all over the German empire. The main routes however have been mentioned.

## The Great French Trans-Continental Air Line

Returning to Paris, the next trip will be over the important C.T.N.A. Air line, the starting point. It is now possible to board a plane at Le Bourget near Paris and be in Constantinople the following night or to reach Warsaw the next morning. This air transport company which is the most



The Weid Airport at Weiden in Bavaria, Germany



All routes covered by the European Air Line at L. D. Gardner



small villages give a very distinct impression of the poverty of the present times.

At last, the capital of Russia is reached and as it is so completely the land and the aviation activities will be given. For the present, the general outline of the flight must wait. Soon, it is planned to have military flights that may be made in Berlin on the plains for this season, a convenience that will add much to the comfort of the passengers. Also, within a year the Soviet capital will become a way station on a much more extensive line through Soviet Russia and Siberia which will have its terminus at Tokyo. One of the significant points to be noted is that during the summer months when flying conditions are good, it is possible to fly with daylight twenty hours a day. With respectable crews that will permit of stopping the trip to Peking will be easily made in five or six days.

Radioing from Moscow, there are several Russian air lines in regular operation. Two run to the South and can be extended next year. If it were not for the hard winter weather, the aircraft development in Russia would have no limitations, as long as it is to be based upon improvement for the successful operation of air lines, with the possible exception of heavy traffic.

(To be continued)

### Lieut. Cyrus K. Betts

It is with great regret that it becomes necessary to report the death of Lieut. Cyrus Betts, Air Corps, who died on Aug. 31 as a result of injuries sustained when he died on Aug. 31. Lieutenant Betts, while flying from Philadelphia to Selfridge Field, in company with two other Air Corps pilots, lost his way in a low fog and crashed into a mountain.



Lieut. Cyrus K. Betts

side near Selfridge, Pa. He sustained severe injuries that resulted for six miles from the cause of the accident, which was not found and taken to a hospital at Selfridge. On Aug. 26, he was transported to airplane from Selfridge to Walter Reed General Hospital, Washington, D. C. for treatment. His condition at the time gave hope of early recovery, but two pneumonia, which developed on Aug. 31, proved fatal.

Lieutenant Cyrus K. Betts, Air Corps, was born at Germantown, Pa., July 2, 1890. He entered the military service as a private, aviation section, Signal Corps, Jan. 30, 1915. He was made second lieutenant, Air Service, temporary rank, Sept. 11, 1919 and on July 1, 1920 was commissioned second lieutenant, Air Service, Regular Army. He was promoted to first lieutenant on the same date. He had considerable experience as a pilot on the Machine Gunner posted during the World War, and later served two years in the Philippine

Islands. His last station was the First Pursuit Group, Selfridge Field, 30 October, 1926.

Lieutenant Betts was one of the Army's most outstanding pilots, among his most notable achievements being the winning of the John L. Mitchell Trophy in the National Air Races, Dayton, Ohio, in 1923, in which he made an average speed of 172.43 m.p.h. In 1925, he was the winner of the Pulitzer Trophy in the National Air Races, held at Mitchel Field, L. I., making an average speed of 245.975 m.p.h. In 1926, Lieutenant Betts and Lieutenant James H. Doolittle, winner of the Schneider Cup Race, for 1925, were awarded jointly the Clarence W. Mackay Trophy for the most outstanding aerial performance during 1925.

In the death of Lieutenant Betts, the Air Corps and the country have sustained a severe loss.

### Lieut. Harmon J. Norton

While practicing in the Schneider Cup race, 1st Lieut. Harmon J. Norton, Marine Corps, was killed on Sept. 20, when he crashed in the Potomac River off Annapolis. Lieutenant Norton was a native of Albion, N. Y., and son of the Marine Corps' first pilot. His death is most regrettable and a severe loss to the service.

After landing a speed trial flight over a water test over the Potomac, and on his return to Annapolis, Lieutenant Norton pulled up behind two Army planes which were flying at about 3,000 ft. Norton's plane was seen suddenly to turn into a steep climb and a perpendicular descent. He appeared to get out of the nose-dive by trying to roll the plane over just before it struck the water. He did not succeed and the plane crashed in about 5 ft. of water, just south of Horns Point.

This plane, the Curtis Race R-2C-2 was flown by Lieut. Al Williams of R. N., who is now the Potomac Race at St. Louis in 1925, and was recently, purchased by the Naval Aircraft Factory at Philadelphia for use as a training plane by the Schneider Cup contestants this year. This plane was flown by Lieut. George T. Coddie as his flight from Philadelphia, Pa. to Annapolis, D. C. a short time ago when he broke the record and covered the distance in 32 min.

### C. Fayette Taylor on the N.A.C.A.

C. Fayette Taylor, Associate Professor in the Dept. of Aeronautics of the Massachusetts Institute of Technology, has been appointed a member of the Sub-Committee on Power Plants of the National Advisory Committee for Aeronautics.

### The Schneider Cup Race

The Schneider Cup seaplane race will be held at Hampton Roads, Va., on Oct. 24, when Italy and the United States will compete for permanent possession of the international trophy, both having won the cup twice before. Italy won the race in 1920 and 1924 while the United States won in 1925 and 1926. It is anticipated that Italy will run three two-person seaplanes, two of which will be equipped with Fiat engines (Italian) and the third with a Napier Lion (British). According to a report, 243 m.p.h. has been reached by these machines so far.

The United States team will consist of the three Curtiss Boeers which took part in the Schneider Cup race last year when Lieut. James H. Doolittle, Air Corps, was the trophy for the United States at a speed of 232.67 m.p.h.

### New Altitude Record

Taking off from the altitude of La, Venezuela, France, on Aug. 23, M. Giffon, is reported to have reached a height of 12,580 meters, or approximately 41,000 feet, during the course of 12,500 meters. Giffon left his plane at 4 p. m. and was seen on the ground at La, 36 miles later. His instruments are showing official tests.

## New Officers—1926-1927 Aeronautical Chamber of Commerce



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## The National Air Races

Last Five Days of Sequi Air Meet Enjoy Better Weather.

WEDNESDAY, SEPT. 25, showed bright and clear, but some of the water still in the field from Tuesday's rains started early sweeping down the runs in the south which led to the automobile parking apron. A. H. Fowler tested out his low-wing lightplane, powered with a Wright Whirlwind 40 hp engine. Two days previously, when the weather had been about normal, for the first time, the plane did not control properly, but a slight change in the gearing of the motor seemed to have remedied the trouble and the plane flew nicely.

Another interesting event was the changing of the engine in the Pitman Super-Wing Arrow. This plane was built especially for the race and received much praise from the various pilots and dignitaries who met it. Although the jury had to land Coxy's Arrow damaged wing struts, it was also decided to enter it in the 248 hp class. This meant strapping in a C-4 engine to an OX-5 engine and then back to the C-4 engine for its own control. In some cases, the plane had to be towed back to the field before the Pitman organization had been working Sunday and night getting things ready, the changing of the engine took off very much later and was actually done in 30 minutes. The work was well organized and much was to be put on the machine to make. Three new control levers were replaced to speed the work of changing the engine and instrument connections and air transport lines would do well to study Pitman's job. Changing engines to suit the field would have a practical value in compressed transportation if it could be done as quickly as Pitman did it.

### OX-5 Elimination Race

The first event on Sept. 25 was the second heat of the elimination trial for the Air Club of Pennsylvania Trophy. The event for planes of 550 cc. and under, took place at the greatest number of miles of any of the events. W. E. A. Boyd's Super sport plane with the Arrow engine did not show up and C. D. Chamberlain's engine Bellanca biplane collapsed while Chamberlain was changing a wheel. The landing gear strut, which had broken, was patched up with burlap and Chamberlain taxied across the line to get his entrance fee back, but, to the surprise of many, he did not attempt to fly. The remaining jobs were, however, all powered with OX-5 engines.

Two Travel Airs and an Alexander Eaglerock took off in the first group. Walter Smith in Waco OX-5 Travel Air was crowded off the course at the start and having gone far enough to get his entry money back decided not to continue. It was noted that the Alexander Eaglerock left the ground after a very short run and climbed quickly. Then Waco 9s then took off and three two more Waco's and the Pitman Super-Wing Arrow started with the OX-5. Due to the small wing area, and the small quantity of the field, the Pitman job took a long time to get off but once in the air showed good speed. During the first lap, however, the special video gear in the Pitman OX-5 got trouble and the plane was forced to land. Then on the running engine and most info of the plane made nearly 500 m.p.h. Kender in his Waco 9, also with a tricked up engine made better than 160 m.p.h. on his last lap but the engine quit suddenly on the second lap and after the first minute more he landed abruptly in a very small field and the plane turned over on its back and was severely damaged through Kender himself was not injured.

With the two favorite planes out of the race the material was narrowed to a man between Fred Hoyt in a Travel Air

and Lloyd Ford and Douglas Davis in Waco 9s. Fred Hoyt, who had flown all the way from Phoenix, Ariz., came in first with a speed of 165.50 m.p.h. Lloyd Hoyt, in a Waco 9, came in second with a speed of 165.5 m.p.h. with Douglas



Howard F. Wally, managing director of the National Air Races, watching the race at Mead Farm Race.

Davis, also in a Waco 9, placing third at 163 m.p.h. John E. Thrupp's Waco 9 came in 4th at 161 m.p.h. The Alexander Eaglerock, piloted by Robert Heland, made 161 m.p.h. These slow speeds made a good race.

The complete results of Event No. 8 were as follows:

Pilot	Plane	Engine	Speed
Fred Hoyt	Travel Air	OX-5	165.50
Lloyd Ford	Waco 9	OX-5	165.5
Douglas Davis	Waco 9	OX-5	163.0
John E. Thrupp	Waco 9	OX-5	161.0
Robert Heland	Alexander	OX-5	161.0
Walter Smith	Waco 9	OX-5	160.0
Howard F. Wally	Waco 9	OX-5	160.0

The lightplane race was scheduled as the next event, and as Kender had not yet returned to the field after his crash, the other three entrants agreed to postpone the event. In the meantime, the military police put on an excellent show for the maintenance of the event. A Morris Bomber glided judiciously in, revolved the field by a wide margin and landed into a ditch on the far side. An amphibian then made two attempts to get off but the mud was too deep. On the third attempt it got off although the pilot made a bit undecided whether to use the knell or the wheel.

Three Morris Cops Racing Planes gave a historical exhibition of formation flying and shooting. Then Lloyd Ford in his General, U.S.M.C., Louis, George P. Oakley, U.S.N., and Louis George H. Henshaw, gave a technical exhibition of speed flying for the Henderson Trophy. Henderson's General was the trophy and was also powered with a traveling bag. Henderson's Henderson also did some extraordinary flying. The plane was broken down. A crash occurred when it was taken down by a Morris Bomber, the crash performed and "boom" Taylor did his "zoom" over the radio.

The next race was a speed and efficiency race for the American Towel and County Club of Detroit Trophy.

### Coxy's Jones versus Jim Ray

Although the large share of the prize money was put up for the efficiency contest, the American Towel and County Club of Detroit Trophy lay in the wind over between Jim Ray and Coxy's Jones. Coxy's plane weighed 600 lbs. best winning speed was 160 m.p.h. and the plane was shown, almost certainly, Pitman's job was designed for flight, such as picture carrying, when speed is essential but all good Philadelphia had out of it to see that it might be able to beat the OX-5. In the previous race Coxy's plane had shown itself to be considerably faster but more than, very possible part of the Pitman job had been stressed and a standard light propeller had been fitted. Jim Ray was also some faster with the plane which he had flown only two hours before his present race.

However, the first lap was disappointing to the leaders of the home town product. Coxy had made 121.4 while Ray had only made 127.9. In the next lap Ray gained and the crowd cheered as he took second lap by crossing up on Coxy's plane. Coxy flew a perfect race ending almost on the point where Ray, who was not so familiar with his plane was more cautious and made wider turns. It was not until the start in the last lap that Jim Ray caught up and passed the speed of his old home. When Coxy finished by the finish line Ray might as well have been a moment of euphoria and then took down the maximum prize Jim Ray's speed was 128.3 and Coxy's was 122.1. The Travel Air came in third at 127.5 m.p.h. the Chase Vought fourth at 124.8. Wright Brothers OX-5 at 121.3 and the third Vought four by DePue took at 118.6.

### Efficiency Winners

The efficiency race was only won by the Wright Brothers which with its 100 hp Whirlwind 28 engine covered 1,200 ft. at over 121 m.p.h. Walter Bech in the Travel Air averaged 400 ft. and Henry DePue in the field, scored over in their 400 ft. time winner in the efficiency contest were equipped with Wright Whirlwind engines.



The Pitman Super-Wing Arrow (Kendall OX-5 or C-4), winner of the American Towel and County Club of Detroit Trophy in speed at 165.50 m.p.h. with C-4 engine.

The complete results of Event No. 11 were as follows:

Pilot	Plane	Engine	Speed
Walter Bech	Wright 9	Whirlwind 28	121.4
Henry DePue	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4
Wright Brothers	Wright 9	Whirlwind 28	121.4

### The Light Planes

The light plane event was postponed until late in the evening due to the fact that A. H. Fowler had crashed in the previous race as on out of the way part of the course and



A November job of the Air Races—Coxy's Jones again

seems to have been the field. Charles C. Daugherty first over to get Kender back to landing field nearby. Kender in the meantime had returned to the Fair Valley and happened a journey and down to the Mead Farm Race. The frames of the crowd were quickly quickly divided between the four contestants. Jack Lees had down his Briggs Dues and the way from Dayton and through storms which had held up many larger planes. Kender who has the several places entered light places in the room without winning had this







mph, which is really a very good speed for a machine of this type. Second speed place was taken by Louis H. Meiler in the all-metal Buhl Vertigo biplane with the Wright Whirlwind engine at a speed of 139.977 mph. He took third place in efficiency.

The complete results of the contest were as follows:

Place	Engine	Pilot	Speed, mph
1	Wright Whirlwind	Walter Whittaker	147.977
2	Buhl Vertigo	Walter Whittaker	139.977
3	Wright Whirlwind	Walter Whittaker	139.977

The speed of the Ford-Road three-engine airplane was a very interesting item. It not only indicates the good performance of the machine but it is a very true indication of the conflict planning of the plane by "Sherry" Schneider during the race. His conclusion of the plane gave the advantage of emptying. At times there was no doubt that his wing tip was little more than half a yard from the ground as he swept the large machine around the final point at from 68 to 75 deg bank. The fact that the Ford plane was last in the efficiency contest of the race was, of course, due to the fact that the machine had three engines which produced an engine displacement in the fuselage that it must be remembered that in our transport operations something must be paid for the greatly added reliability of the three-engine airplane.

When the Ford plane had landed, Schneider gave a very interesting and complete demonstration of the maneuverability of the ground of a three-engine machine equipped with wheel brakes as in this machine. Right to front of the fuselage Schneider made his long machine perform a series of sharp turns about each wheel separately with no engine movement whatever, but merely by locking one wheel and operating up the outside engine to pull the machine around.

#### Kansas City Rotary Club Trophy

By this time, the long string of pursuit planes entered in the final contest of the pursuit, the race for the Kansas City Rotary Club Trophy, were starting around, ready for the signal to start. Goodness of the ground made it impossible, as in the previous day, for these machines to take off from Model Point Field. This event normally took place at the Fairmount race track and had the year. The race was open to both Army or Navy pilots and all pursuit type machines, over a distance of 120 miles.

There was tactical attack in it, right along Air Corps' three, Navy, and one Marine Corps. The race was a close match and proved an exciting event, even, as the first place there were one or two comparatively interesting places in the race and especially the absence of competition between both the Army and the Navy was good. The Navy entered the trophy, Louis C. C. Oakley, in a Curtiss P-10, a Boeing fighter P-10 with a Packard 24-1500 engine at 100 hp, moving with a speed of 139.400 mph. His time for the 120 miles was 30 min 53 sec. The Air Corps took second place, Louis C. C. Oakley, winner of the Model Point trophy the day before, flying 179.400 mph in a Curtiss Hawk P-10 equipped with a high compression Curtiss V-1500 engine of 100 hp. His time was 40 min 30 sec. Third place was won by the Army Air Corps, Capt. Ross Hart, flying a Curtiss P-2 with a normal Curtiss V-1500 engine at 137.969 mph with a time of 35 min 75 sec.

#### Two Air-Cooled Pursuits

The machine of exceptional interest in the race was the Navy's Wright Aquila P-10, which was equipped with the Pratt and Whitney Wasp engine, which was piloted by Louis C. C. Oakley, U.S.N. and the Air Corps' Curtiss P-10 equipped with the inverted V-engine Liberty engine, which plane was piloted by Louis C. C. Oakley. Both these planes were, naturally, of the more power, each engine being rated at 160 hp; but the Wasp engine plane was very obviously the slower of the two. The Wasp is a radial engine and the performance of a pursuit plane equipped with an engine of this type has been the cause of much complaint in the past.

The expected resistance of the projecting cylinder heads, of these inverted engines, was not, as was expected, found to have impaired the speed of the plane to any great extent. The machine was making a speed of 160.820 mph, but owing to the fact that Lieutenant Chapman cut a piece on the second lap, he was disqualified from placing in the contest.

#### Results

The Curtiss P-10 with the inverted Liberty engine made a speed of 167.766 mph but it too, was disqualified coming to Lieutenant Chapman cutting a piece on the sixth lap.

The complete results of the race are given below:

Place	Engine	Pilot	Speed, mph
1	Curtiss P-10	Louis C. C. Oakley	167.766
2	Curtiss P-10	Louis C. C. Oakley	167.766
3	Curtiss P-10	Louis C. C. Oakley	167.766
4	Curtiss P-10	Louis C. C. Oakley	167.766
5	Curtiss P-10	Louis C. C. Oakley	167.766
6	Curtiss P-10	Louis C. C. Oakley	167.766
7	Curtiss P-10	Louis C. C. Oakley	167.766
8	Curtiss P-10	Louis C. C. Oakley	167.766
9	Curtiss P-10	Louis C. C. Oakley	167.766
10	Curtiss P-10	Louis C. C. Oakley	167.766

#### The "Voice from the Sky"

With this event, the National Air Races for 1936 naturally came to a close with the completion of the two events of Sept. 7 which were postponed until Sunday, Sept. 12. Before the spectators had left the field, however, a demonstration of the "Voice from the Sky", was put on. By means of a new invention, it is possible for an aircraft to be seen clearly heard to the people on the ground below. The airplane was the Vertigo, the Buhl Vertigo, with the Liberty engine, and was the underside of the fuselage was fitted with what appeared to be a large radio loud speaker. When the machine was at least 1000 ft. over the audience, the voice of one of the occupants of the machine speaking popular music was heard perfectly clearly and clearly on the ground. The six pieces of the plane were identified while the demonstration was in process. The demonstration was very successful and immediately suggests striking possibilities in the airplane for advertising purposes.

#### Final Events

The events which had been postponed on Sunday on account of the wet condition of the field were run off on Sunday, Sept. 13. The weather was fine and a fair-sized crowd had gathered to watch the show. "Gussie" Taylor on the microphone kept the crowd amused and their own several prize-winning jumps, one by design, that and two dogs on the dog, flying high. Two of the participants made a last comeback and the program opened (how intense drama). The day long Sunday, the Army and Navy did not get as their show of aviation and they were greatly missed.

#### Bonanza Franklin Trophy

The first event was the Bonanza Flying Race for the Bonanza Franklin Trophy. There were three teams of three planes each entered. After making out lap of the course, the planes landed as near as possible to a flag. The passenger would get out, grab the flag and run back and to the flag to the next first of the team, which repeated the process. The event and \$500.00 in prize was won by a team consisting of Fred Rowe and Casey Jones on Thomas Motor and A. H. Kessler in a Waco. The Longhorn team, consisting of Bob Hewitt, Jack Brown and Douglas Davis, all flying Waco, took second place and won \$200.00. The Pioneer team came in third and won \$200.00.

## Tioga Engine Parts Contributed to the North Pole Flight

IN a message to the Wright Aeronautical Corporation, Lieut. Comdr. R. E. Byrd reported that his three 200 h.p. Wright Whirlwind aircooled radial engines functioned perfectly during his entire 15 hour 51 minute flight to the North Pole and return to Kings Bay.

Behind the wonderful reliability of these American aircraft engines is sound design, engineering, materials and workmanship, no less in the components of which the engines were constructed than in the finished product.

Naturally, therefore, it is a source of satisfaction to this company to be able to say that

**TIOGA**  
**STEEL CYLINDER SLEEVES**  
are used in Wright Whirlwind Engines

## Tioga Steel & Iron Company

52nd and Gray's Avenue, Philadelphia, Pa.

Solecity of Tied-Windings Iron & Steel Co., High Bridge, N. J.

Steel Plant: Philadelphia, Pa. & Boston, Pa.

See, Boston, Pa. & Co., Boston, Pa.

CONTRACTORS TO  
U. S. Air Service, Bureau of Aeronautics, Navy Dept., Wright Aeronautical Corp.,  
The Curtis Aeroplane & Motor Co., Inc., Pratt & Whitney Aircraft Engine Department

The Kandler, Kessler Aircraft Co's Rogers' Model which had had a forced landing on the first day of the race had been repaired enough to start across the line but not to fly. The Heath Tanager with Bristol Cherub engine (75 cu in.) and the Kandler Model and Duggan-Dunn with Wright-Hispano-Brown engine (84 cu in.) all got off on good form in the race but the Dayton Darts, Veece, Light, Appleton, Treppe. The contestants were supposed to reach an altitude of 500 ft. before getting to the second pylons. A balloon was used to mark the altitude but as none was available, an airplane was supposed to mark the altitude but did not get there with the second lap. Kessler spent some time looking for it and the time he wasted but lost the race. Heath was out to win and flew extremely low on the last part of the lap, which was against the wind and then changing very quickly to get his 500 ft. Kandler took the turn very wide and fast and seemed to have some difficulty in getting his 500 ft. Jack Linn in the Duggan-Dunn, which is designed for cross-country work, was outclassed as to speed but he finished his place last fully. Incidentally, in both the places where the pilots alight where the wing, the firm stated that they had trouble seeing the pylons while Linn had no difficulty in this respect. The Heath Tanager came in first at 55.4 m.p.h., winning the Trophy and \$750.00, the Duggan, second at 52.7 m.p.h., winning \$450 and the Kandler at 50.7 m.p.h. was awarded \$250.00 for third place and also the fourth prize of \$100.00.

#### Legislative Results

The complete results of Event No. 7 were as follows—

Pilot	Plane	Time	Speed
J. H. Kessler	Heath Tanager	1:00.00	55.4 m.p.h.
Donald D. Linn	Duggan-Dunn	1:02.00	52.7 m.p.h.
A. H. Kandler	Kandler Model	1:04.00	50.7 m.p.h.

#### Scientific American Trophy

The race for the Scientific American Trophy was also 12 laps around a 5 mile course. The winners were the same as in the previous race except for the winner of the Scientific American Trophy, which was won by a 2-cylinder Lorraine engine. The plane, of the vintage of 1926, did well but it was the only low-center sport plane at the meet which was a real mainstay in the development of this type of plane. In this race, Kessler piloted showed his superior speed, averaging 54.4 m.p.h. and winning the Trophy and \$750, while Heath came a second at 51.2 m.p.h., winning \$500, Chesterfield, in the Duggan, did 49.5 m.p.h. getting \$250 and the Rogers did 50.3 m.p.h. and got \$750. In this race, Kessler seemed more familiar with his plane, handling more sharply on the turns and flying low. Heath's engine seemed a little out of

sync at his efforts, he kept falling behind especially toward the end of the race. The Duggan-Dunn was flying smoothly, but had some real expert work when some one had engine trouble, and so we did.

The complete results of Event No. 8 were as follows—

Pilot	Plane	Time	Speed
J. H. Kessler	Heath Tanager	1:00.00	55.4 m.p.h.
D. D. Linn	Duggan-Dunn	1:02.00	52.7 m.p.h.
A. H. Kandler	Kandler Model	1:04.00	50.7 m.p.h.

With this event, the National Air Races for 1926 came to a final close. Maj. Howard P. Webb, managing director of the National Air Races and of all aircraft activities in the Aero-Club of America, and of all those who worked with him are to be congratulated on having so successfully met the great difficulties accompanying the organization of a show of this nature in the time of many very serious complications, some the most significant of which was the weather.

#### N.A.A. Officers for 1926

The annual banquet of the National Aero-Club, Association was held on the First Atlantic City on Thursday, Sept. 9, after which Walter S. Adams, of Boston, Mass. was elected president of the Association for the coming year.

Other officers chosen were: Carl M. Wilby, St. Joseph, Mo., vice president; Volney G. Clark, Seattle, in absentia, and Sumner Condit, New York, Treasurer.

Gen.-commodore elected were: Orville Wright of Dayton, Donald Douglas, Los Angeles, G. Harry B. Vane, Detroit, and Charles Hays, Seattle.

#### Aeronautical Exhibit at the Sesqui

The Palace of United States Exhibits, Transportation Building which was the scene and a half scene at the Sesqui Centennial Exposition, contains an aeronautical exhibit which contains all details of the subject. The entire hall of the building houses the exhibits prepared by the various departments of the Government, which include that of the National Advisory Committee of Aeronautics, and here one can see the various parts of an airplane, with explanation as to what operation function they perform in flight. The section half of the building is devoted to transportation exhibits, and the very well selected machine planes and apparatus loaned by the United States Army Air Corps and the Navy. The NC-4, the first airplane to cross the Atlantic, is in this section, as well as models of all types in use during the past ten years.

## Where There's A Winner There's a Curtiss-Reed

Here are the results of the first six events at the National Air Races in Philadelphia

#### "ON-TO-THE SESQUI" RACE.

Won by Fred Hays in a Travel Air, equipped with Curtiss-Reed Metal Propeller.

#### AERO CLUB OF PENNSYLVANIA TROPHY.

Won by B. L. Rowe in a Thomas-Morse, equipped with Curtiss-Reed Metal Propeller.

#### INDEPENDENCE HALL TROPHY.

Won by "Casey" Jones of the Curtis Flying Service, in a Curtis "Oacle", equipped with Curtiss-Reed Metal Propeller.

#### "B.B.T." TROPHY.

Won by a team of three airplanes, flown by "Casey" Jones, A. H. Kandler, and B. L. Rowe. Two of these three machines were equipped with Curtiss-Reed Metal Propellers.

#### NATIONAL GUARD TROPHY.

Won by Lieut. C. W. Rach, in a Curtiss "Jenny" equipped with Curtiss-Reed Metal Propeller. Of the eleven identical "Jennies" competing in this race, the winner was the only one using a metal propeller.

#### AERO CLUB OF PENNSYLVANIA TROPHY

Won by Fred Hays in a Travel Air, equipped with Curtiss-Reed Metal Propeller.

All of these Curtiss-Reed propellers were of the standard Deutscher type, of which there are more than a thousand in service in the United States.



Walter H. Adams  
President of the National Aero-Club Association



Douglas E. Condit  
Treasurer of the N.A.A.



Carl M. Wilby  
Vice-President of the National Aero-Club Association

THE CURTISS AEROPLANE

Office  
Garden City, New York



AND MOTOR CO., INC.

Factories  
Garden City and Buffalo, N. Y.

Boat equipment as propellers, launching cranes for catapults, wing ponds, gasoline gravity tanks, oil tanks and radiators and exhaust pipes form a part of this outfit.

The Aeronautical Club of Queens, the Chamber of Commerce of America has assembled an exhibit of airplanes, showing the history of transportation in America, from the legendary start of the Village in 1336 A.D. to the last continental by airplane, New York to San Francisco, 1913.

#### Industry Displays

Manufacturers of aircraft, parts and accessories have introduced exhibits of great interest. The Curtiss Aeroplane and Motor Company, Inc., of Garden City and Buffalo, N. Y., has an extensive display over the exhibits of the U. S. Navy. The Wright Aeroplane Corporation, of Paterson, N. J., also has on view a Wright-Warfield 300 hp. engine complete, and also engine parts. Huff-Daland Airplane, Inc., of Detroit, Pa., exhibits a diesel engine, used in building the hull wood and other airplane parts. Other exhibitors are the Edo Aircraft Corporation, College Park, N. Y.; All-weather Aircraft Co., Troy, Ohio; Sporty Outfitter Co., Brooklyn, N. Y.; the S. K. Jackson, Inc., New York City; Fairchild Aircraft Company, New York City; Vrooman Co. Co., Philadelphia, Pa.; Stewart-Hartburn Co., New York City; Macgregor Co., Kenosha, Wis.; Wood Construction Co., Chicago, Ill.; Power Industries, Inc., Danbury, N. Y.; Mohrle & Co., Chicago, Ill.; L. W. Farnham & Co., Boston, Mass.; Vetter Sales, Kenosha, Wis.; O. K. Hilde, Dr. Farnham, Phila.; Air Service Publishing Co., Washington, and the Aviation Enterprises, Indiana, New York City.

#### The Aircraft Industry Shines at the Air Races

The performance, as a whole, of the numerous airplanes entered in the many events of the National Air Races can only be considered as extremely commendable from the standpoint of the aircraft industry and its excellent products. While, of course, there were quite a number of airplanes and engines in the races which were by no means first, the performance of these old timers combined to reflect the confidence in both design and construction. In addition, there were a number of new airplanes entered and also a number of, if not perfectly new, at least new up-to-date engines.

Among the airplanes, Waco, Triest, Airco and Stearman were in prominence, and while none of them are entirely new types, they still represent the most tried and modern strength in civilian aviation at this country today. Then, among the engines, there was the performance of the new Armstrong during the past year. The Fordwing, with Curtiss C-4 engine, and the Beech-Wing Aero with both C-4 and Curtiss UX-3, put up some fine performances. Among the larger airplanes, the Huff-Daland Niagara, one of the largest single engine bombing planes in the world, is one of the new machines, although one of four machines did take part yesterday, also with engines. Yesterday, a speed of 130.7 m.p.h. was set up by the winning Niagara in the Liberty Bell Trophy race. Huff-Daland Niagara planes and Packard engines took the first three places in this event. All these machines were equipped with the Packard 2000 engine development 540 hp. which was now accepted as one of the most reliable high-powered engines in use at this time.

It would seem almost unnecessary to discuss the performance of the Curtiss biplane in the two places, as it was the plane which, for these places was known, and only in this manner has all over the world to among the most irreversible proved machines as standard. The Curtiss pursuit may be said to have set the pace in the close design, together with their Curtiss B-12 and V-3400 engines. The new Story-Beech pursuit, one of which was the open pursuit plane race at 160 m.p.h. the fastest race on the East with a 500 hp. Packard engine, are also among the latest tested plane developed.

In the matter of engines, the outlook is equally favorable. While the low power Curtiss engines, which are so extensively used in civilian flying throughout the country and which figured very largely in the events at Philadelphia, are

not by any means new products, they contained some indication of a certain readiness of design which is constantly being. Among the modern engines in side are in commercial flying, the Wright Whirlwind suddenly holds the lead, a fact which was well demonstrated in Philadelphia in the Detroit News Air Transport Trophy race for land planes carrying at least 1,000 lb. weight. The Wright Whirlwind engines were first third and fourth places in the efficiency division and first, second and third places in speed. The Wright Whirlwind was first in each division, the Huff-Daland Niagara was second in speed, with the Ford three-engine plane third. Each of these machines was equipped with Whirlwind engines, the Ford three-engine having three of them. The Whirlwind engine was also in the winning place in efficiency in the Aviation News and Country Club of Detroit Trophy race. The machine was the Wright Whirlwind. Another interesting test engine performance was that of the Pack and Wilbur Wing model aircraft engine in the County's airplane division, which was won in the Kansas City Rotary Club Trophy race for powered planes. Unfortunately, the plane was crash-landed due to cutting a piston but it put up a speed of 100 m.p.h. Many had been of the opinion that a radial engine in a ground plane would not make a very speedy machine, but the obviously is not in the case of the Waco engine in the Airplane plane.

All the engines in the race performed remarkably well and there were only one or two feelings due to engine trouble. In which is every one was of a special nature not directly attributable to the engine themselves. Scattered throughout the race were the majority of, if not all, the most modern American aircraft engines and the performance set in the new here to be placed in it to all modern aircraft to the reliability of these engines.

#### Winning Planes Equipped With Streamline

Four of the first five places in the Reliability Test, August 7 to 21, were equipped with Macgregor Streamline in rods. Walter Beale's Tamiel Air plane, which finished first in the race, Stearman's Stearman, made by Stearman Aircraft Corp., Detroit, and two Waco planes, made by the Airplane-Waco Corp., Troy, were all equipped with Macgregor in rods. The Reliability Test, which was given interest by the industry, emphasized the necessity for all aircraft which make the standard flying efficiency.

The record of these four Macgregor equipped winners is an indication of the progress which is being made in the development of efficient commercial flying in this country.

#### New Air Mail Stamp

A new air mail stamp of a 15 cent denomination is now being printed at the Bureau of Engraving and Printing and will be placed on sale in the near future. The stamp will be used to cover air mail postage over one zone of the government operated transcontinental route, where the air mail postage is 3 cents plus transportation over one of the contract air mail routes up to 1,000 miles, where the postage charge is 20 cents. Thus 5 cents is charge for transport over the government line and 10 cents over the contract line.

The stamp also will be used as contract air mail rates where the distance to be traveled is in excess of 1,000 miles. At present, only one contract route exists, that between Seattle and San Angeles.

The stamp is a horizontal rectangle 75/200 by 104/200 in. in size and is printed in wavy. The central design features a map of the United States, showing some of the right and available regions. On each side is an airplane in flight, one traveling East and the other West. Across the top of the stamp is white Roman letters are the words "United States Postage" with the words "Air Mail" directly beneath. At the bottom of the stamp is shaded letters in the word "Cents" and in both lower corners are the white numerals "15c". Ornamental plastic borders appear at each side of the stamp.



## A Surge of Power

The motorist, driving in safety on a well paved road, likes to feel a surge of power when he presses his foot upon the accelerator. He seldom has any real need of this power, but he gets a keen satisfaction from the knowledge that it is there to use when he wants it.

To the aviator, however, this rush of power often means life and safety. A sudden gust of wind, an "airlock" in the path, and his craft rocks and heaves. Failure of the engine, or a sluggish response to the throttle, may mean death.

That is why the aviator so carefully examines and tests his motor before starting a flight. That is why he is so momentous upon the highest quality of fuel and oil. He knows what engine failure may bring, and he takes no chances.

### Standard Aviation Gasoline and Aero Oils

are the choice of the majority of flyers throughout the Middle West, because they have learned from experience that they can depend on these products for swift power when it is most needed. Standard Aviation Gasoline and Aero Oils are available at every leading filling station in the Middle Western states. For a map showing the location of these fields, send for our "Aviation Manual," which will be mailed free upon request.

### STANDARD OIL COMPANY

Head Office: 615 & Michigan Ave. Chicago

## A Tribute to the Air Mail Service

*All Credit to the Men Who Fly the Mail—In All Weather, Day and Night.*

By W. T. WHITLOCK

WHEN THE air, the 500 million candle power flood lights at Brook Park Field were projected on and the darkness of the night was suddenly changed to an eerie daylight. Thrills began to pop and the waiting mail plane was started. A little to the East, the shadow of a Liberty could be heard, which grew into a roar as the mail plane approached. Still no sign of it. Suddenly a beam of light from the sky appeared, seemed to hang at times and later the bird, red and green wing tip lights at the mail plane could be perceived. It hovered over the ground, settled, and finally moved to the hangar, where the waiting mechanics awaited the possessor of mail and transferred them to the terminal building. Paul Collins, wireless radio man, jumped from the cockpit and, with his light park hanging against his legs, walked to the mail office.

"First landed safe out of New York was like flying in a well. Fog was heavy over the mountains and you couldn't make out a thing. When it had later, the moon broke through the clouds and made a lot more visibility. Over Delaware it was fine, clear weather with a good visibility. The mountains are bad and the changing temperature made a foggy mist of the time. Well, guess I'll turn in"—and with that walked wearily to his waiting car.

The Boeing was suddenly started up and Shirley Short dashed her flying top and parachute, dived into the machine and landed into the wind. A burst of engines and the plane became a war light soaring into the distance. A few hours later, it would land in Chicago, where its possessor of mail would be transferred from plane to plane until they reached their destination in San Francisco.

### The Start of Night Mail

The first night mail was served on the Central Division, Chicago to Chicago, on July 1, 1935. Much preparation was needed for this enterprise and planes were furnished night mail before the actual work on the main lines. Between war and emergency jobs prepared at an approximate de-

tails of twenty-five miles apart and many incidents had to be arranged. It took some months alone for the setting of the beams. Gradual extension of the night flying facilities both East and West, made it possible, a year later, to make the first mail to coast, one-day flight. The mail was longer waited for the light of day, but flew from Fresno to New York, regardless of weather or time of day. At present, revolving beams of 500,000 candle power are placed at intervals along the route, the average distance in the Eastern Division being every thirteen miles. These beams, however, are to be replaced shortly by automatic lights, which will not require the review of a controller. At main terminals along the route, flood lights of five million candle power, which illuminate the night into day, are installed equipment.

The lighting equipment on the planes is the result of long study. Most of the experimenting was made at McCook Field, and the equipment is complete Army material. Besides the wing-tip lights, each plane is fitted with four emergency lights, which can light up the countryside for as long as three miles. The planes have three eye opening windows for lights on the dash and the red and green wing tip navigation lights.

Mail pilots are extremely content about their exploits, which is a shame. Casualties take of color and horses, to my asking of times when crash landing was a matter of life or death, could be told. Some years ago, a mail pilot was on his way from New York to Cleveland, and, when over the mountains, noticed that his oil pressure had fallen. To land would have been fatal. Fog, mist and the mountains made it impossible that he was in the air. By quick thought he rolled the machine from side to side, making the remaining oil in crash over shock around the bearings and thus made his port. The next pilot, when east West, flew into Telegraph Canyon and hit the top of a mountain. He and the wings remained on top of the hill while the engine and fuselage rolled thousands of feet into the Grand Canyon. Unfortunately he suffered a broken arm.



Private flying in England. A 251. 25th of the London Aeroplane Club being refueled. The propeller is said to be \$200 per month.

## THE ADVANCE AIRCRAFT Co.

**LARGEST PRODUCERS OF COM-  
MERCIAL AIRCRAFT IN AMERICA  
ANNOUNCE**

### PRICE REDUCTION

ON THE IMPROVED

## WACO-9

THREE-SEATER

# \$2250.

AT TROY, OHIO

More WACO'S are now in service for profit and pleasure than all other planes now in production in America.

**THE PERFORMANCE MADE THE DEMAND**

*Write for Details*

**THE ADVANCE AIRCRAFT COMPANY  
TROY, OHIO**

Did you ever hear of the "Rabbit Hunter"? A pilot was flying over the Boston Division when his engine cut out. The landing facilities were not, and when he landed, the ground, he had to lodge buy a row of trees only to find more trees. Of course, this could not last indefinitely and he finally crashed, but was unhurt. Next day the ground force went to get the plane and found a rabbit under the radiator. Hence was dubbed the "Rabbit Hunter" for some time afterward.

A fellow landed at Panayrales resulted in a rather humorous accident. The pilot was dressed in his winter fly ing boots with the soles wet up about his head. The air had just caught over the lagoon and there was beginning to rain on his shoulders over the hills. He knuckled at the door of a nearby farmhouse and a woman came to the door. He started to enter, but she said when she felt, screaming from the inside. Instantly, he was discomfited. A moment later she rushed back with her husband who has a dead gun. The pilot thought that he was miserably the third side of the eternal triangle and was at a loss to know what to do. The husband then laughing, handed him the long ended down his clothes, and after a few words to his wife, she also became mortified. All of which caused him a page from the top of a newspaper in the hotel-parlor. The farmer, who owned the place, said "My wife thought that you were a goodly and was almost frightened to death." She wanted for an untold number, naturally, was so great complaint to the flyer, but his reply was quiet as the pilot would have said him a shooting they that he passed in the distance.

#### The Superior Pilot

Field Manager Blower, of Cleveland, sent you an attached as an excellent illustration of a pilot. The pilot, along with him was four or five of the best and pilots with their planes to join in the activities. A certain day at the field was because of the performance of his Rangler and, unfortunately, told a few of the men who had the machine was the superior to any D11 that ever flew. Which they took seriously and, not tried to get him to let that his was would lead a new plane. However, he was much against games of chance, it seemed as would not water. One by one the pilot started away. At length, the last took his much wanted Rangler into the air and, immediately, those D11s took off. It was a sight to see. They dived under him, passed over him and flew in circles about him until the plane was burned to death. Shaver stood below watching them. He shook his head and said, "How could he not let water to stay out of a man's heart as to tell to them. I guess these pilots act to water, look at them." And then he laughed. They are a wonderful bunch of men—the crews of planes—and, surely deserve credit. They are the explorers of the skies, and the men who are having no summer break across the horizon, a name that will live through history, along with the Pony Express and the Covered Wagon.

Then as there were members of the in the Boer Express, the first aircraft, they have been members in civil aviation's cause. The anti-pilots who flew in storms, in winter, at night, to keep up the chains of the service—"The most cruel war." My hat is off to the boys who fly the planes from New York to San Francisco—the pilots of the Air Mail Service.

#### New Chicago—Twin Cities Air Mail Contractor

The Northern Airways, Inc., of Detroit, Mich., will take over the operation of the Chicago-Twin Cities mail line from the present contractor, Clinton Pedersen, on Oct. 3, and has been announced by Postmaster General New.

Pedersen recently gave 45 days' notice, as required by law in his contract to operate on this line. Since then, he has been called for and speedily released, Dept. 3. The Northern Airways, the only bidder, was awarded the contract.

The new contractor will take over the pilots from the present operator and will not replace a pilot who will be held in place at the end of the line, something that Pedersen has not done, and a detail which is reported to materially reduce the prospects of success for the enterprise.

#### Side Slips

By Helen H. Cohen

Here at The Magnet Air Route from "The Story" Special Correspondent.  
(Please speak in Mr. King's letter)

If my company was very much to know first I and the friends are not at the air times as originally planned. This is on account of the fact that in the time of our last flight, coming from Long Island, there was a dense fog over New York and nearby New Jersey towns. Early the next morning when I finally arrived at my destination and I got out in search of fuel for both myself and the Service. You can imagine my consternation when I found I was not in Philadelphia at all but in one of the small towns near the border.

After standing it over, it seemed only logical I should stop here a few days and wait for the weather to clear. With such odds for the outcome for a heavy winter arriving in March, and everything. This is only the situation to stay for when I am so badly shaken, at which I go to the air times when I am in the work, the boys will ask me whether it is worth while to hop down to Atlantic City and if I don't know, they will say, "What kind of a correspondent are you doing?" And my advice to any designer would be to get some ideas on speed models with good climbing and staying, why, this time is the place.

As to for the landing gear on display, say, you know me!

At first I was thinking it might be a good idea to have just your most down here in connection with this heavy road, but on second thought the boys might start flying for a case of their own.

As to the newspaper that, as the first few days, Oats Jones was a couple more men, thereby adding more color to his limited stock.

I greatly fear he was not himself, in spite of the fact that he was the man, on account of the report reaching him that he had been a few miles from instead of only having a few miles. When he got to writing a story he had a lot to say and a day the article.

One of the points was being to pay off the mortgage on the land had been a few days of the men for the first time. He was disappointed that only pilots were paid for the model more instead of boys, making, most known and other men too. He said one of the smallest things he never saw was when one of the models, as which an aged member had created his return before, disappeared in a low-flying road and he was not even seen. The driver and officials were not on hand waiting for it to come back.

A lad was growing his hair for the first time but had to go up the side of the last machine on account of the trouble system on his five cylinder engine which cut out of itself. There was nothing in the lack of instructions about whether the firing order of the cylinders was 1, 2, or 3, 4 and he didn't want to take a chance with the boys for me.

Tomorrow I'll look away from the rest of us, of whom I had friends I had been here and will attend the air times when you read the review. I was glad the managers of the race went ahead as usual as spite I wasn't there as I wouldn't want to spoil the season people's fun. This shows the reason is better managed than last year, what with ordinary racing with fixed bets and fixed bets and fixed bets in spite I told them who I was.

Yrs. Vly Telys.  
The Integral Aviator

## AIRPORTS AND AIRWAYS

### Hartford, Conn.

By Henry Dyer Gosh

With the return of the 12th Observation Squadron to Hartford Field from their latest duty assignment at Mather Field, activities in the airport have taken an added aspect. The majority of the personnel from the members of that squadron, and, therefore, the old in some extent helped the Hartford airport in general. Flying D11s and O 2s took the boys a good time, after months of being at Mather "booming."

Nothing from here has been dropping in to see Hartford's airport expert in such quantities that a complete check is hard to keep. They included, however, the Hon. Edward P. Warner, on his special voyage, a flock of four Martin Bombers, a flight of the King V's, equipped a "Wasp" equipped airplane and numerous planes from all parts of the country. They all say they had their share on the field and equipment.

While Hartford's airport is the result of the increased demand and efforts of a number of men, Capt. Clarence Kneass has been a very large part of the work. He has put forth serious effort in improving some of the most important developments of the airport, along both military and civilian lines.

The large D-11s, Remington-Ramoth, equipped performed well when they tried last week. A "Wasp" equipped with postures by P. H. Spencer, recently took off for a long-distance trial of the shore route. Two Navy Douglas longships have taken the place of the Army D11 equipment used

by Dr. Warren as his cloud-dispersing experiment.

Paula Thompson and Webb continue to push their Air Mail planes through on good schedule, in spite of a long run of the darkest kind of flying weather. To see them push off for New York at night into the blackness of a storm, without ground lights to guide them, is a lesson in the progress of aviation.

### San Antonio, Tex.

Through special permission from President Calles of Mexico C. M. Freytag and Don Pablos, Houston flyer, left San Antonio recently in two planes that the City of Mexico. The course of the flight is now a proposed air road route between Dallas City, San Antonio and Houston. The pilots are carrying letters from Mayor Don Hahn, of Houston, to the mayor of Mexico City. The planes have been named "Don Houston" and "Senator Meyer." They are specially built Standard, with 150 hp. Hispano-Suiza engines. Stage air being made along the route of all four cities and no although it being made to secure interest in the proposed air road line.

J. H. Laver, instructor in the San Antonio Airfield, took a trip at Dallas Field, has been flying in work many times over the past few months. He is the first person in San Antonio to show the means of transportation between home and business. He now has a D-11 Standard plane and takes off each morning from the field on the South Loop. The distance between the end Dallas Field is 7 mi.

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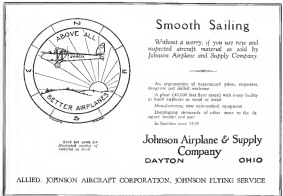
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## Chicago, Ill.

By Otto Kline

Stanley and Edgar LaPelle have flown two of the Chicago Aeronautical Service Company's planes to West Plains, Mo., and from there to St. Louis. The following day they flew to Grand Rapids, Minn. collecting and passengers carrying mail. The Aeronautical Service has obtained some very fine photographs outside lately, and their photographs will be on exhibition at the International Photographers' convention to be held in Chicago soon. The company reports the photographic business still very good. Two weeks of the summer weather helped them complete their work in record time.

Ernest V. Thompson has purchased a Lincoln Standard transport from the North American Company. LaPelle Coville has sold his Deane, and John Huber has acquired a C-55 Standard. Him, will leave at Ashland Park, had a special C-55 job built up by the Thrift Airplane Company. The plane is being set up at this writing. The Lincoln Company is enjoying a very good season in their flying school. They have at present 150 day students and 20 evening students, who take their flying instruction on Saturdays and Sundays.

Considerable publicity is again given the project of establishing a short-line airport near the lake front at 22nd Street. The Chicago Air Board is giving the matter serious consideration and it is hoped that their efforts will not only result in a flying field at 22nd Street, but also on the newly formed land at the South end of Lincoln Park, which is close to one of the city's finest hotel and shopping districts.

Lafayette Meyer and Bill Bessie are busy again with their airplane change at the Central State Republics at Aurora, Ill. The trip is still as successful as ever, and never fails to draw a large crowd of spectators.

## Channah, Kansas

By Neil Owen

This has been a very busy season for local pilots. Plans to fly on one or two day conference and on Sundays they have been constantly well cleared up.

O. E. Deckerhoff finally acquired another Canard and is flying on Southern again. John Spaulding sold lately and Hector has been on his way to the city. Ray Haddock and Vera White have been flying wing-walking and have got away with it (so far).

Two new C-55s from the University School of Aeronautics, Houston, Tex., were here lately and wanted the business about by playing tag with the mob.

Alison and Wren of Phoenix, with a new Wan, Doug of Oklahoma, with a 25-40 and Wolf and Tobey, of Idaho, with a 1925-26 model, were very much interested. Wolf took most of the bit out of the level air when he crossed up under them and Spaulding in a Standard. On at least they thought so.

## Company Charter Plane for Mapping

When word came on Aug. 20 to the Chicago Aeronautical Service that they were being ordered immediately for the making of a 50 air route map of the territory between Park and Niagara, Ill., the absence of the mapping and photography plane in Grand Rapids, Mich., seemed a problem.

One of the company's planes left on Aug. 22 for West Chester, Ohio, in an advertising campaign, and the other, chartered by the West Michigan Fair for parachute jump, passenger service and status, will be about two weeks in Grand Rapids.

The company met the emergency, however, by chartering a Vickers Transport, equipped with an Eastman K-5 aerial camera, and leaving on time with E. W. Mack, pilot and J. R. Allen, photographer, for the Water Airport, three miles south of Muskegon, Mich. The scale of the map is to be 1:600,000 in the north. It will be located in the laboratories of the company's transportation building.

## Lake's Airport, Towson, N. D.

By J. Benson

The other day, Pilot Horne took up a flight, a Ford car, and a light plane, giving him a few carbide, and airplane came down again and did not feel as clearly as it did before he went up so to what he could stand.

C. Smith of Wisconsin, Minn., with his C-55 Standard, has been laid up for several weeks on account of engine trouble.

A Detroit golf tournament was held across the road from our field on Sunday, Aug. 22. On the day we took up several passengers to see the sights from the Air.

The Wan that passed over our field a few weeks ago headed for the Canadian border failed to stop on its return trip, and not even dropped on a bottle, as it was seen flying low by us.

J. Brittain attended the Elbow Ford Tour at St. Paul in touring with much enthusiasm for the success of the campaign for commercial use in the area below.

The manufacturers of airplanes in this State failed to take advantage of the opportunity to observe and show their wares to the many interested pilots. We very much disappointed in not being able to see the little Dugan Flyers which get only so far as Hastings, Minn., and saw several more of them.

Stop at our airport when passing this way.

## Over Custer Lake by Airplane

By R. A. Stokes

A trip over Custer Lake by airplane! The latest advertisement of commercial aviation in the Pacific Northwest! On a few more days it was considered quite a trip and required some help of land travel to be made and to land in the water-living boat to look himself in a van, of this beautiful lake of Southern Oregon, situated in the center of an arid section near 7,000 ft. above sea level.

There are today and will make the trip with a motor

of a few hours of comfortable driving from the city of Klamath Falls, Oregon, and although the very best is no way because less inspiring, the novelty of the night is wanting off. But the Klamath Air Service Company, a newly founded commercial airport of Klamath Falls, comes to the rescue of the limited old tale and offers, for a reasonable price, a trip over the natural wonder by airplane.

A Washington County journey with the Wright J-4 is most for the trip, leaving Klamath Falls and flying the 53 miles North over picturesque Klamath Lake, spending 20 minutes over Custer Lake and the Caves National Forest, then returning to Klamath Falls, over the Williamson River valley. The entire trip requires only an hour and a half in the air.

## Genesee, Switzerland

A new aerial Alpine record was made on Sept. 14 by the Genesee, a Curtiss, Lancaster, Genesee, and Genesee. These three flew, taking an average of two hours for each flight. Although loaded by our subcommittee on the first trip, Genesee, Lancaster, Genesee, and Genesee, took a slight distance from existing guides. The material was for an observatory there.

During the second trip, the parachute landed at the foot of the glacier, but, owing to snow and the weather, there was not able to land the small instrument. After the third flight, Lancaster, Thurst flew over the lower glaciers of Genesee, the flight being satisfied by many tourists.

## St. Louis, Mo.

In a report made Sept. 3 by W. T. MacKinnon, secretary representative, to William P. McCracken, Jr., Assistant Secretary of Commerce, Dr. MacKinnon, the establishment of new 48 acre summer landing fields and the construction of twenty four ft. mooring towers are recommended, along the St. Louis Channel river.

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Climbing speed	104 M.P.H.	104 M.P.H.
For fuel	104 M.P.H.	104 M.P.H.
With Wright J-4	104 M.P.H.	104 M.P.H.
Maximum speed	104 M.P.H.	104 M.P.H.
Climbing speed	104 M.P.H.	104 M.P.H.
For fuel	104 M.P.H.	104 M.P.H.

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The report states that the landing fields should be situated 30 mi. apart, each being lighted at night by 20 white lights evenly spaced, five on each side of the field, as in to permit safe landings from any direction. The distance between landing bases was recommended to be 50 mi.

The St. Louis-Chicago wing is about 277 mi. long and takes in Springfield and Peoria in Illinois. It is now used by the Robertson Aircraft Corporation, which operates two planes a day over the route, carrying mail, passengers and freight.

According to plans of the survey officials, whenever an incident on the route occurs, the visiting flight, operated from 50 ft. aerial bases, built on a remote base, will be kept in service during all hours of darkness. They will work automatically, shooting down opened strong enough to be visible in favorable weather for a distance of 30 mi.

#### The Illinois Model Aero Club

The Illinois Model Aero Club was founded in January 1932 to study and promote the science of aviation through the medium of the model airplane. This club was one of the first of its kind in the world. Since its organization in 1932, it has steadily progressed and today it is the largest club of its kind in the World, holding the two improved World's records for rubber driven model airplanes.

It was due to the constant research work done by its members that the club was able to become center of the United Trophy, which was offered for competition during the years of 1934-1935. The competition was in existence through the year of 1935 but, due to the War, it had to be discontinued. In 1936, the National Model Airplane Convention was resumed. This year the club won the trophy, for the third time, becoming permanent owner of the trophy.

Though there was no national competition from 1925 to 1935, the members kept the research work and experimenting up, which is directly responsible for the success of the club in the National Trophy Contest of 1932, 1934, 1935. In the

contest of St. Louis in 1935 the club was undefeated winner over a very large field. The club members won all eight prize places in the contest. The club was very near to be successful at the 1935 meet at Dayton. It was on trophy and all prize places. It was at this meet that Robert Jones, one of the club's foremost members, established the World's record of 16 mi. 14 in. 14 in. This record was established under very adverse conditions.

In 1935, at New York, the trophy was again won by the club against a very expert field. The New York meet was the most important contest of the three, as one field of contestants consisted of the most expert talent collected on the field for a model study. The club was successful because of the persistent progress which the members had made in the study of model design and construction.

The Illinois Model Aero Club has been the center of model airplane development since 1916 and is looked to by all the present clubs for information on design and construction and flying of rubber driven model planes. This information is gladly given to those who request for it, as the club is organized "to perpetuate and study, the art and science of aviation through the model airplane."

The address of the club is: Illinois Model Aero Club, Audubon Hotel, Chicago 21.

#### Lawrence, Kansas

By Dale M. Allen

D. R. Ray, an employee of Chris Hensinger, Chrysler dealer, went to Chicago, May 28 and flew his new Super-Judy mail, Sunday, on the new Super field five miles North of Lawrence, near the proposed Victory Highway route. This field will be used by the Alliance Airplane Co. for all flying. It has a mile run North and South.

The Alliance Airplane Co. is now getting installed in its new home, Fourth and Perry streets, North Lawrence. High lift wings are being turned out as quickly as possible.



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#### Convention of Seaplane Operators

A demonstration of seaplane flying is being arranged for Sept. 28. The convention of the Seaplane Pilots Association, an organization made up of former pilots and now catered to in aviation, will be held at the New Haven Yacht Terminal, Inc. who have placed their seaplane facilities at the New Haven Harbor, New Haven, Conn., at the disposal of the Association.

The main idea of the convention is to get all the people that have a subconscious interest in seaplane flying together for large complimentary event, so that they may have such other better and be able to take a united stand in this development. It is intended to show the public the truly neglected possibilities that are open to the seaplane man, the seaplane and the commercial seaplane operation, and to show flying along our Atlantic Coast. The grounds of the meet are as follows:

Event 1—New to New Haven

Event 2—Race for Boston and OMAA national seaplane as required seaplane

Event 3—Speed boat race

Event 4—Land Coast Cup will be given to pilot taking off with full "Pier Line" airplane length of 1000 feet and returning to starting line in the shortest time

Event 5—Race for flying boats only. Single colored of under 135 ft.

Event 6—Race for U. S. Seaplane Seaplane

Event 7—Race for Seaplane with motor of over 200 hp. The "Old New Haven" will be given to all seaplane pilots. A handicap race, 2nd prize of a barrel of airplane engine oil and cup, 3rd prize of \$25 and cup is open to all seaplane pilots. The prize will be awarded to the first seaplane that have arrived from the greatest distance. Distance covered will be measured by the most direct water route from point of departure as shown on U. S. Charts. In event of two planes arriving from the same distance and coming in by way of the first State position, the one that has the least head-bow will be the winner. The event closes at 10:00 Eastern Standard Time, September 28, 1936.

A handicap cup will be awarded to the U. S. Seaplane pilot that arrives from the greatest distance. The event will be about 20 miles over a triangular course that is entirely made the New Haven Harbor.

The rules, method of starting and finishing will be explained to all contestants before the race. The duration of the race will be 200 miles over a triangular course that is entirely made the New Haven Harbor.

All competing planes will be assigned a number which must be displayed in a conspicuous manner.

Entries for all events close 4 noon today, Sept. 28, 1936.

## United States Air Forces

#### Kelly Field, Tex.

Because a large number of people from San Antonio and the personnel of Kelly Field, three night parachute jumps were made recently by several men of the 10th School Group Parachute Unit. Private C. S. Robinson, Chief School Parachute, and P. H. Parham, 10th School Parachute, were the two men to jump the first night. Last, J. L. Moore jumped the plane that took Robinson up, while Lieutenant Orville L. Dickinson left the ground. It had been planned that the plane would stay close together in the air, then allowing the two men to jump and land in order to keep the parachute on both until they reached the ground, but Private Dickinson became slightly anxious to leave his plane and land off at 10:15 p.m. The light plane took off and the two jumped and then was shot in Private Dickinson's, as it appeared that he was drifting off the field. Private Robinson landed on the



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